October 21, 2005
AET 05-0077

Mr. Jack R. Strosnider
Director, Office of Nuclear Material Safety and Safeguards
Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

American Centrifuge Plant
Docket Number 70-7004
Submittal of Revision 5 of the Environmental Report for the American Centrifuge Plant in Piketon, Ohio (TAC No. L32308)

Dear Mr. Strosnider:

USEC Inc. (USEC) hereby submits to the U.S. Nuclear Regulatory Commission (NRC) Revision 5 of the Environmental Report for the American Centrifuge Plant. Enclosure 1 provides changed pages for the Environmental Report to ensure a consistency between documents concerning the plant's assumed tails assay. Revision bars in the right hand margin depict changes from the previous version submitted to the NRC.

The changes noted in Enclosure 1 also have an impact on the NRC's Draft Environmental Impact Statement and have been appropriately noted in USEC's comments submitted under separate cover (AET 05-0075).

If you have any questions regarding this matter, please contact Peter J. Miner at (301) 564-3470.

Sincerely,

S. A. Toelle

Steven A. Toelle
Director, Nuclear Regulatory Affairs

cc: M. Blevins, NRC HQ
J. Davis, NRC HQ
Y. Faraz, NRC HQ
B. Smith, NRC HQ

NMSS01

Enclosure: As Stated

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Rec'd 11/23/05
OCD

Enclosure 1 of AET 05-0077

Changed Pages for the Environmental Report

(Non-Proprietary Information)

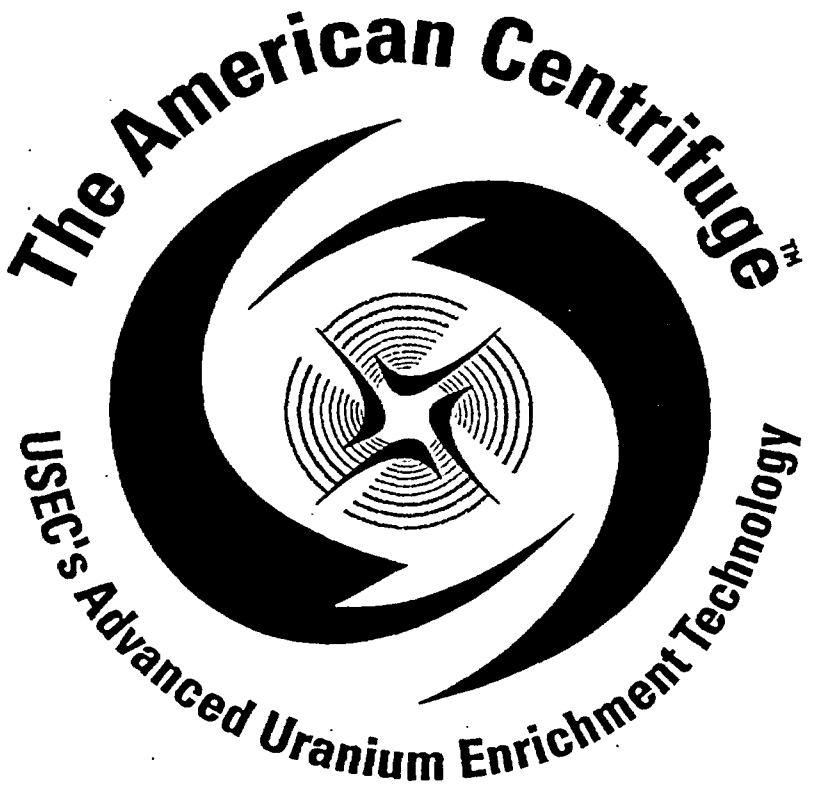
Enclosure 1 of AET 05-0077

Remove and Insert Instructions

Remove (and properly destroy)	**Insert**
NR-3605-0001, Environmental Report for the American Centrifuge Plant	
Cover Page – Revision 4	Cover Page – Revision 5
Inside Cover Page – Revision 4	Inside Cover Page – Revision 5
ULOEP-1 through ULOEP-4	ULOEP-1 through ULOEP-4
4-129/4-130	4-129/4-130

Environmental Report

for the American Centrifuge Plant
in Piketon, Ohio



Revision 5

Docket No. 70-7004

October 2005

Information contained within
does not contain
Export Controlled Information

Reviewer: D. Hupp
Date: 10/20/05

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LA-3605-0002

ENVIRONMENTAL REPORT FOR THE AMERICAN CENTRIFUGE PLANT
in Piketon, Ohio

Docket No. 70-7004

Revision 5

Information contained within
does not contain
Export Controlled Information

Reviewer: D. Hupp
Date: 10/20/05

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UPDATED LIST OF EFFECTIVE PAGES

Revision 0 – 10 CFR 1045 review completed by L. Sparks on 07/29/04 and the Export Controlled Information review completed by R. Coriell on 07/30/04.
Revision 1 - 10 CFR 1045 review completed by J. Weidner on 05/05/05 and the Export Controlled Information review completed by R. Coriell on 04/29/05.
Revision 2 – 10 CFR 1045 review completed by R. Coriell on 06/16/05 and the Export Controlled Information review completed by D. Hupp on 06/16/05.
Revision 3 – 10 CFR 1045 review and the Export Controlled Information review completed by D. Hupp on 07/27/05.
Revision 4 – 10 CFR 1045 review completed by J. Weidner on 08/16/05 and the Export Controlled Information review completed by Len Phillips (DOE) on 08/16/05.
Revision 5 – 10 CFR 1045 review completed by R. Coriell on 10/20/05 and the Export Controlled Information review completed by D. Hupp on 10/20/05.

Page No.	Revision	Page No.	Revision
Cover Page	5	1-28	1
Inside Cover Page	5	1-29	1
ULOEP-1 through	5	1-30	1
ULOEP-4		1-31	1
i	1	1-32	1
ii	4	2-3	1
iii	4	2-4	1
iv	4	2-5	4
v	4	2-6	1
vi	4	2-7	4
vii	4	2-11	1
viii	4	2-12	1
ix	4	2-13	1
x	4	2-14	1
xi	4	2-15	1
xii	4	2-16	4
1-2	1	2-17	1
1-3	4	2-18	1
1-7	4	2-19	1
1-10	1	2-20	1
1-11	1	2-21	4
1-12	4	2-22	1
1-14	1	2-23	1
1-15	1	2-24	1
1-16	1	2-25	4
1-17	4	2-26	1
1-18	1	3-2	4
1-19	1	3-4	4
1-20	1	3-5	4
1-21	1	3-7	4
1-22	1	3-9	4
1-23	1	3-13	1
1-24	1	3-14	1
1-25	1	3-18	4
1-26	1	3-20	4
1-27	1	3-21	4

Page No.	Revision	Page No.	Revision
3-22	4	4-6	1
3-23	4	4-7	1
3-24	4	4-8	1
3-25	4	4-9	1
3-26	4	4-10	1
3-34	4	4-11	1
3-37	1	4-12	1
3-38	4	4-13	4
3-40	1	4-14	4
3-41	1	4-15	4
3-42	1	4-16	4
3-43	1	4-17	4
3-44	1	4-18	4
3-45	1	4-19	4
3-46	4	4-20	4
3-62	4	4-21	4
3-63	1	4-22	4
3-64	4	4-23	4
3-65	4	4-24	4
3-66	4	4-25	4
3-67	4	4-26	4
3-68	4	4-27	4
3-69	4	4-28	4
3-70	4	4-29	4
3-71	4	4-30	4
3-72	4	4-31	4
3-73	4	4-32	4
3-74	4	4-33	4
3-75	4	4-34	4
3-76	4	4-35	4
3-77	4	4-36	4
3-78	4	4-37	4
3-79	4	4-38	4
3-80	4	4-39	4
3-81	4	4-40	4
3-82	4	4-41	4
3-83	4	4-42	4
3-85	4	4-43	4
3-86	4	4-44	4
3-87	4	4-45	4
3-88	4	4-46	4
3-89	4	4-47	4
3-90	4	4-48	4
4-2	4	4-49	4
4-3	4	4-50	4
4-4	1	4-51	4
4-5	1	4-52	4

Page No.	Revision	Page No.	Revision
4-53	4	4-98	4
4-54	4	4-99	4
4-55	4	4-100	4
4-56	4	4-101	4
4-57	4	4-102	4
4-58	4	4-103	4
4-59	4	4-104	4
4-60	4	4-105	4
4-61	4	4-106	4
4-62	4	4-107	4
4-63	4	4-108	4
4-64	4	4-109	4
4-65	4	4-110	4
4-66	4	4-111	4
4-67	4	4-112	4
4-68	4	4-113	4
4-69	4	4-114	4
4-70	4	4-115	4
4-71	4	4-116	4
4-72	4	4-117	4
4-73	4	4-118	4
4-74	4	4-119	4
4-75	4	4-120	4
4-76	4	4-121	4
4-77	4	4-122	4
4-78	4	4-123	4
4-79	4	4-124	4
4-80	4	4-125	4
4-81	4	4-126	4
4-82	4	4-127	4
4-83	4	4-128	4
4-84	4	4-129	4
4-85	4	4-130	5
4-86	4	4-131	4
4-87	4	4-132	4
4-88	4	4-133	4
4-89	4	4-134	4
4-90	4	4-135	4
4-91	4	4-136	4
4-92	4	6-1	1
4-93	4	8-1	1
4-94	4	8-2	1
4-95	4	8-3	1
4-96	4	8-4	1
4-97	4	9-1	1

Page No.	Revision
9-2	1
9-3	1
9-4	1
9-5	1
9-6	1
B-1	1
B-2	1
C-1	4
C-2	4
C-3	4
C-4	4
D-1	4
D-2	4
E-1	4
E-2	4
E-3	4
E-4	4
E-5	4
E-6	4
E-7	4
E-8	4

accordance with the appropriate security and regulatory requirements and will be disposed at an appropriate site in accordance with regulatory requirements.

USEC will manage newly generated LLMW in compliance with 40 CFR Part 266 Subpart N and Ohio Administrative Code (OAC) Chapter 3745-266. These requirements are as follows:

- Storage of LLMW waste in tanks or containers are in compliance with the requirements of the ACP license that apply to the proper storage of low-level radioactive waste (not including those license requirements that relate solely to recordkeeping);
- Storage of LLMW in tanks or containers are in compliance with chemical compatibility requirements of a tank or container in 40 CFR 264.177, or 264.199 or 40 CFR 265.177, or 265.199;
- Certification that plant personnel who manage stored conditionally exempt LLMW are trained in a manner that ensures that the conditionally exempt waste is safely managed and includes training in chemical waste management and hazardous materials incident response that meets the personnel training standards found in 40 CFR 265.16(a)(3);
- Inventory of stored conditionally exempt LLMW performed at least annually and inspections are conducted at least quarterly for compliance.

Mixed wastes that cannot be processed on-site are stored until treatment is available at commercial treatment plants that are licensed in accordance with 10 CFR Part 61, or applicable NRC Agreement State requirements.

Off-reservation shipments of radioactive wastes are manifested in accordance with 10 CFR 20.2006. Waste shipments are packaged, labeled, and manifested in accordance with applicable State, DOT, NRC, and EPA requirements.

ACP generated radioactive wastes are disposed of at commercial disposal plants that are licensed in accordance with 10 CFR Part 61 or applicable NRC Agreement State requirements. Packages are inspected prior to shipment, as appropriate, to verify compliance with applicable packaging and transportation requirements. Copies of the disposal site license are retained in accordance with procedural requirements.

Waste disposals are in compliance with 10 CFR Part 20, Subpart K. Waste disposal records are retained in accordance with 10 CFR 20.2108. Classified waste is disposed of in accordance with 10 CFR Part 95 and Security Program requirements.

LLRW and LLMW generated at the ACP is tracked through a Request for Disposal system. Each waste container is given a unique identification number. The identification numbers are entered and maintained in a computer-based database. The database is updated to reflect location, characterization, treatment data, and waste disposal information.

Shipments of LLMW will occur approximately every 90 days. LLMW that contains high enough grams of ^{235}U to impact the TSDF's permit gram limit acceptance criteria would be scheduled with the TSDF facility and will be shipped, as the TSDF NRC License gram limit will allow. The waste will remain on-site and managed in accordance with LLMW rules in OAC 3745-266 until shipments can be scheduled to the TSDF.

Depleted Uranium Hexafluoride (Tails)

Overview

USEC has a strong history of safe handling and storage of DUF_6 at both the Paducah and Portsmouth Gaseous Diffusion Plant sites. With regard to DUF_6 disposal, USEC intends to continue with efforts to move the material into commercial markets. Any remaining ACP tails that can not be commercially reused will ultimately be disposed in the same manner as the DOE tails inventory, the disposal of which is authorized by the USEC Privatization Act. DOE is currently constructing and plans to operate two Depleted Uranium Hexafluoride Conversion Facilities. These facilities are located at DOE's Piketon, Ohio and Paducah, Kentucky sites. USEC currently plans to store ACP tails at the ACP in accordance with applicable statutory authorizations and regulations until it can be commercially utilized or DOE's conversion plants can accept the tails for processing. For planning purposes, it is assumed that the ACP DUF_6 would be converted at DOE's Piketon conversion facility. USEC's mature and proven Tails Management Strategy – focusing on safe storage and disposal of DUF_6 produced at the ACP – is detailed below.

Tails to be Produced

Depleted uranium hexafluoride (tails) will be produced while enrichment activities are conducted at the ACP. The actual production rate of tails will be a function of the demand for enriched uranium. For a given production level, the amount of tails generated by the ACP will be equivalent to the amount of tails that would have been generated using PGDP. For planning purposes, the theoretical production rate of tails at the ACP is based on all centrifuge machines in a 3.5 million SWU per year plant running 24 hours per day, 365 days per year for 30 years, with product enriched to 4.95 weight percent ^{235}U and tails depleted to approximately 0.35 weight percent ^{235}U. At this rate, the ACP 3.5 million SWU plant will generate approximately 9,520 MT of tails annually or 265,300 MT of tails over the 30-year license period. This would equate to slightly more than 21,269 tails cylinders. At this rate, the 7 million SWU plant will generate approximately 19,030 MT of tails annually or 512,730 MT of tails over the 30-year license period. Over a thirty-year period, the 7 million SWU ACP is expected to produce approximately 41,105 cylinders of depleted uranium compared to the Piketon DOE reservation and ETTP inventory, currently planned for conversion at the Piketon facility, of 21,900 cylinders.

Production of higher assay product at the same tails assay results in lower rates of tails generation. If the plant were to produce product at a maximum licensed assay of 10 weight percent ^{235}U, the tails generation rate would be about 87.4 percent of the rate stated above (8,321 MT of tails per year for 3.5 million SWU per year of plant capacity).